



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/825,831	04/05/2001	Shiomo Ruschin	1371/4	3049

7590 09/21/2006

DR. MARK FRIEDMAN LTD
C/O BILL POLKINGHORN-DISCOVERY DISPATCH
9003 FLORIN WAY
UPPER MARLBORO, MD 20772

EXAMINER

DEAN, RAYMOND S

ART UNIT	PAPER NUMBER
----------	--------------

2618

DATE MAILED: 09/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/825,831	Applicant(s) RUSCHIN, SHIOMO	
	Examiner Raymond S. Dean	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 2, 4 - 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 2, 4 - 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see remarks filed June 20, 2005 with respect to the rejection(s) of claim(s) 1, 9 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art Baranowski et al. (US 2002/0067825).

Baranowski teaches a cellular communications system for use by a user to communicate via a cellular communications network, the system comprising: (a) a cellular communications unit for two-way communication with the cellular communications network (Figures 2, 3 Section 0030), (b) a headpiece including at least one earphone and a microphone (Figures 2, 3, Sections 0021, 0028), and a bi-directional optical communications link associated with said cellular communications unit and said headpiece and configured to provide a communications link between said cellular communications unit and said headpiece such that said earphone produces an audio output corresponding to data received by the cellular communications unit and said cellular communications unit transmits data corresponding to an audio input received by said microphone (Figure 1, Sections 0023, 0029, the headset can be wired to the cellular telephone, said wired means comprises fiber optic cable, the typical basic function of a headset that is used as a hands-free device with a cellular phone is to transduce the incoming electrical signal from the cellular phone to an audio signal such

Art Unit: 2618

that the user can hear the information and to transduce the audio signal from the user to an electrical signal such that the cellular phone can properly receive and then transmit said information via the cellular network thus this function is inherent), said bidirectional optical communications link including at least one optic fiber deployed between said cellular communications unit and said headpiece (Section 0023, a fiber optic cable comprises at least one optic fiber).

Priority

2. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Israel on April 5, 2000. It is noted, however, that applicant has not filed a certified copy of the 135483 application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 2, 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Baranowski et al. (US 2002/0067825).

Regarding Claim 1, Baranowski teaches a cellular communications system for use by a user to communicate via a cellular communications network, the system comprising: (a) a cellular communications unit for two-way communication with the cellular communications network (Figures 2, 3 Section 0030), (b) a headpiece including at least one earphone and a microphone (Figures 2, 3, Sections 0021, 0028), and a bi-directional optical communications link associated with said cellular communications unit and said headpiece and configured to provide a communications link between said cellular communications unit and said headpiece such that said earphone produces an audio output corresponding to data received by the cellular communications unit and said cellular communications unit transmits data corresponding to an audio input received by said microphone (Figure 1, Sections 0023, 0029, the headset can be wired to the cellular telephone, said wired means comprises fiber optic cable, the audio data received from the cellular phone via the optical link will produce an audio output at the headset, said cellular phone will transmit audio data that is created from the user speaking into the microphone on the headset, said audio data will be transmitted via the cellular network), said bidirectional optical communications link including at least one optic fiber deployed between said cellular communications unit and said headpiece (Section 0023, a fiber optic cable comprises at least one optic fiber).

Regarding Claim 2, Baranowski teaches all of the claimed limitations recited in Claim 1. Baranowski further teaches a bi-directional optical communications link that is the sole communications link between said cellular communications unit and said

Art Unit: 2618

headpiece (Section 0029, when the alternative wired connection, which comprises an optical link, means is used said connection will be the sole connection).

Regarding Claim 7, Baranowski teaches all of the claimed limitations recited in Claim 1. Baranowski further teaches a headpiece that includes at least one battery (Figure 2, Section 0021, since the headset is portable it must rely on batteries to power it's circuits therefore an inherent battery is taught).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4, 6, are rejected under 35 U.S.C. 103(a) as being unpatentable over Baranowski et al. (US 2002/0067825) in view of Lefevre et al. (5,821,530).

Regarding Claim 4, Baranowski teaches all of the claimed limitations recited in Claim 1. Baranowski does not teach at least one optic fiber that is implemented as two optic fibers.

Lefevre teaches an optic fiber that is implemented as two optic fibers (Column 2 lines 12 – 15, any number of optic fibers can be used)

Baranowski and Lefevre (Column 2 lines 41 – 43) teach the use of optic fibers thus it would have have been obvious to one of ordinary skill in the art at the time the

Art Unit: 2618

invention to use the two optic fibers taught in Lefevre as an alternative means for providing a bi-directional optical link between the headset and cellular communications unit.

Regarding Claim 6, Baranowski teaches all of the claimed limitations recited in Claim 1. Baranowski does not teach at least one optic fiber that is implemented as at least one plastic optic fiber.

Lefevre teaches at least one optic fiber that is implemented as at least one plastic optic fiber (Column 2 lines 15 – 17).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the plastic optic fiber taught in Lefevre in the communication system of Baranowski in order to provide a low cost design that would enable a reliable short range link between the headset and the cellular communications unit as taught by Lefevre.

7. Claims 5, 9 – 10, 13, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baranowski et al. (US 2002/0067825) in view of Charlier et al. (US 6,577,877 B1).

Regarding Claim 5, Baranowski teaches all of the claimed limitations recited in Claim 1. Baranowski does not teach wherein said at least one optic fiber is implemented as a sole optic fiber.

Charlier teaches at least one optic fiber that is the sole optic fiber (Figure 5, Column 5 lines 31 – 43).

Baranowski and Charlier teach the use of optic fibers thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the sole optic fiber taught in Charlier as an alternative means for providing a bi-directional optical link between the headset and cellular communications unit.

Regarding Claim 9, Baranowski teaches a headset for use with a cellular communications unit for bi-directional communication with a cellular communications network, the cellular communications unit having an electrical output for providing an audio-out signal corresponding to data received from the cellular communications network (Figures 2, 3 Section 0030, the cellular phone (250) will provide the audio data to the headset) and an electrical input for receiving an audio-in signal for transmission via the cellular network (Figures 2, 3 Section 0030, the headset will transmit the audio data from the user to the cellular phone for further transmission via the cellular network), a headpiece including a headpiece optical receiver responsive to a received optical signal to generate a corresponding electrical driver signal (Sections 0023, 0029, since the wired connection can be a fiber optic link said headset will comprise an optical receiver to receive the optical signal to generate a corresponding electrical driver signal to drive the headphones or speakers (102)), at least one earphone that is electrically connected so as to be driven by a electrical driver signal to generate an audible sound (Sections 0023, 0029, since the wired connection can be a fiber optic link said headset will comprise an optical receiver to receive the optical signal to generate a corresponding electrical driver signal to drive the headphones or speakers (102) to generate an audible sound), and a microphone that generates an electrical microphone

Art Unit: 2618

signal corresponding to sensed audible sounds (Section 0029), and a headpiece optical modulator responsive to said microphone signal to generate a corresponding second optical signal (Sections 0023, 0029, since the wired connection can be a fiber optic link said headset will comprise an optical modulator to generate an optical signal in response to the user speaking into the microphone (106)); and an optic fiber connection including at least one optic fiber (Section 0023, a fiber optic cable comprises at least one optic fiber).

Baranowski does not teach an electro-optic interface unit for connection to the cellular communications unit, said interface unit including: an interface-unit optical modulator configured for receiving said audio-out signal from the cellular communications unit and generating a corresponding first optical signal and an interface-unit optical receiver responsive to a received optical signal to generate a corresponding electrical audio-in signal to be provided to the electrical input of the cellular communications unit, the optic fiber connection being associated with said electro-optic interface unit and said headpiece and being configured to form an optical link between said interface-unit optical modulator and said headpiece optical receiver, and between said headpiece optical modulator and said interface-unit optical receiver.

Charlier teaches an electro-optic interface unit for connection to the cellular communications unit, said interface unit including: an interface-unit optical modulator configured for receiving said audio-out signal from the cellular communications unit and generating a corresponding first optical signal (Column 2 lines 16 – 24, Column 3 lines 17 – 52) and an interface-unit optical receiver responsive to a received optical signal to

Art Unit: 2618

generate a corresponding electrical audio-in signal to be provided to the electrical input of the cellular communications unit (Column 2 lines 16 – 24, Column 3 lines 17 – 52), an optic fiber connection being associated with said electro-optic interface unit and a peripheral and being configured to form an optical link between said interface-unit optical modulator and a peripheral optical receiver (Figure 5, Column 5 lines 31 – 43, Column 3 lines 17 – 52), and between a peripheral optical modulator and said interface-unit optical receiver (Figure 5, Column 5 lines 31 – 43, Column 3 lines 17 – 52).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the electro-optic interface including the interface-unit optical modulator and receiver circuitry taught in Charlier in the system of Baranowski to enable a bi-directional optical link between the cellular phone and headset.

Regarding Claim 10, Baranowski in view of Charlier teaches all of the claimed limitations recited in Claim 9. Baranowski further teaches a headpiece (Section 0021). Charlier further teaches an optic fiber connection that employs a single optic fiber to provide an optical link both between a interface-unit optical modulator and a peripheral optical receiver, and between said peripheral optical modulator and said interface-unit optical receiver (Figure 5, Column 5 lines 31 – 43, Column 3 lines 17 – 52).

Regarding Claim 13, Baranowski in view of Charlier teaches all of the claimed limitations recited in Claim 9. Baranowski further teaches a headpiece that includes at least one battery (Figure 2, Section 0021, since the headset is portable it must rely on batteries to power it's circuits therefore an inherent battery is taught). Baranowski further teaches a headpiece optical receiver/optical modulator (Sections 0023, 0029

Art Unit: 2618

since the wired connection can be a fiber optic link said headset will comprise an optical receiver to receive the optical signal to generate a corresponding electrical driver signal to drive the headphones or speakers (102), since the wired connection can be a fiber optic link said headset will comprise an optical modulator to generate an optical signal in response to the user speaking into the microphone (106)).

Regarding Claim 15, Baranowski in view of Charlier teaches all of the claimed limitations recited in Claim 9. Baranowski further teaches a headset (Section 0021). Baranowski further teaches wherein said headset is substantially electrically insulated from an interface unit (Sections 0023, 0029, the electrical signals are converted to optical signals which can travel via an optic fiber, this method of transmission substantially insulates the headset from electromagnetic radiation thus an inherent electrical insulation is taught).

8. Claims 11 – 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baranowski et al. (US 2002/0067825) in view of Charlier et al. (US 6,577,877 B1), as applied to Claim 9 above, and further in view of Lefevre et al. (5,821,530).

Regarding Claim 11, Baranowski in view of Charlier teaches all of the claimed limitations recited in Claim 9. Baranowski in view of Charlier, as demonstrated in Claim 10 above, teaches a single optic fiber to provide an optical link between an interface-unit optical modulator and headpiece optical receiver and between said headpiece optical modulator and said interface-unit optical receiver.

Art Unit: 2618

Baranowski in view of Charlier does not teach a first optic fiber to provide an optical link between said interface-unit optical modulator and said headpiece optical receiver and a second optic fiber to provide said optical link between said headpiece optical modulator and said interface-unit optical receiver.

Lefevre teaches a first and second optic fiber (Column 2 lines 12 – 15, any number of optic fibers can be used).

Baranowski in view of Charlier and Lefevre (Column 2 lines 41 – 43) teach the use of optic fibers thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the two optic fibers taught in Lefevre as an alternative means for providing a bi-directional optical link between the headset and cellular communications unit.

Regarding Claim 12, Baranowski in view of Charlier teaches all of the claimed limitations recited in Claim 9. Baranowski in view of Charlier does not teach at least one optic fiber that is implemented as at least one plastic optic fiber.

Lefevre teaches at least one optic fiber that is implemented as at least one plastic optic fiber (Column 2 lines 15 – 17).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the plastic optic fiber taught in Lefevre in the communication system of Baranowski in view of Charlier in order to provide a low cost design that would enable a reliable short range link between the headset and the cellular communications unit as taught by Lefevre.

Art Unit: 2618

9. Claims 8, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baranowski et al. (US 2002/0067825) in view of Moncorge (5,552,978).

Regarding Claim 8, Baranowski teaches all of the claimed limitations recited in Claim 1. Baranowski does not teach wherein said bidirectional optical communications link is configured to transfer power from said cellular communications unit to said headpiece for powering at least one electronic component within said headpiece.

Moncorge teaches an optical communications link that is configured to transfer power for powering at least one electronic component (Column 4 lines 15 – 20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the optical fiber link of Baranowski with the power transfer capability of Moncorge as an alternative means for providing power to the headset as taught by Moncorge.

Regarding Claim 16, Baranowski teaches a cellular communications system for use by a user to communicate via a cellular communications network, the system comprising: (a) a cellular communications unit for two-way communication with the cellular communications network (Figures 2, 3 Section 0030), (b) a headpiece including at least one earphone and a microphone (Figures 2, 3, Sections 0021, 0028), and a bi-directional optical communications link associated with said cellular communications unit and said headpiece and configured to provide a communications link between said cellular communications unit and said headpiece such that said earphone produces an audio output corresponding to data received by the cellular communications unit and said cellular communications unit transmits data corresponding to an audio input

Art Unit: 2618

received by said microphone (Figure 1, Sections 0023, 0029, the headset can be wired to the cellular telephone, said wired means comprises fiber optic cable, the audio data received from the cellular phone via the optical link will produce an audio output at the headset, said cellular phone will transmit audio data that is created from the user speaking into the microphone on the headset, said audio data will be transmitted via the cellular network).

Baranowski does not teach wherein said bidirectional optical communications link is configured to transfer power from said cellular communications unit to said headpiece for powering at least one electronic component within said headpiece.

Moncorge teaches an optical communications link that is configured to transfer power for powering at least one electronic component (Column 4 lines 15 – 20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the optical fiber link of Baranowski with the power transfer capability of Moncorge as an alternative means for providing power to the headset as taught by Moncorge.

10. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baranowski et al. (US 2002/0067825) in view of Charlier et al. (US 6,577,877 B1), as applied to Claim 9 above, and further in view of Moncorge (5,552,978).

Regarding Claim 14, Baranowski in view of Charlier teaches all of the claimed limitations recited in Claim 9. Baranowski in view of Charlier does not teach an optical power transmission system configured to transfer power via said optical fiber connection

Art Unit: 2618

to said headpiece for powering said headpiece optical receiver and said headpiece optical modulator

Moncorgé teaches an optical communications link that is configured to transfer power for powering at least one electronic component (Column 4 lines 15 – 20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the optical fiber link of Baranowski in view of Charlier with the power transfer capability of Moncorgé as an alternative means for providing power to the headset as taught by Moncorgé.

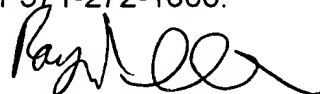
Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond S. Dean whose telephone number is 571-272-7877. The examiner can normally be reached on Monday-Friday 6:00-2:30.

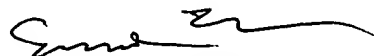
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban can be reached on 571-272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2618

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Raymond S. Dean
September 7, 2006



EDWARD F. URBAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600